

I Claim:

1. An abrasive pad for the wet-chemical grinding of a substrate surface, comprising:

a polymer matrix having polymers with repeat units, and a water-solubility of 0.03 to 3 g/l; and

abrasive particles embedded in said polymer matrix.

2. The abrasive pad according to claim 1, wherein said polymers with the repeat units are selected from the group consisting of organic and inorganic polymers.

3. The abrasive pad according to claim 1, wherein said polymer matrix has a water-solubility determined by a hydrophilicity of said repeat units.

4. The abrasive pad according to claim 3, wherein the hydrophilicity of said repeat units is determined by polar groups attached to said repeat units.

5. The abrasive pad according to claim 3, wherein the hydrophilicity of said repeat units is determined by nonpolar groups attached to said repeat units.

6. The abrasive pad according to claim 1, wherein the water-solubility of said polymer matrix is determined by a distribution of said repeat units.

7. The abrasive pad according to claim 1, wherein said repeat units are derived from a nonpolar or polar monomer unit.

8. The abrasive pad according to claim 7, wherein said nonpolar monomer unit is styrene and said polar monomer unit is vinylpyrrolidone.

9. The abrasive pad according to claim 1, wherein said abrasive particles include one or more oxides selected from the group consisting of aluminum oxide, silicon oxide, and cerium oxide.

10. A chemical mechanical polishing device, comprising:

a holder for a wafer; and

an abrasive pad according to claim 1 movably disposed relative to said holder for chemical mechanical polishing of the wafer.

11. A process for the wet-chemical grinding of a substrate surface, which comprises polishing the substrate surface with the abrasive pad according to claim 1.